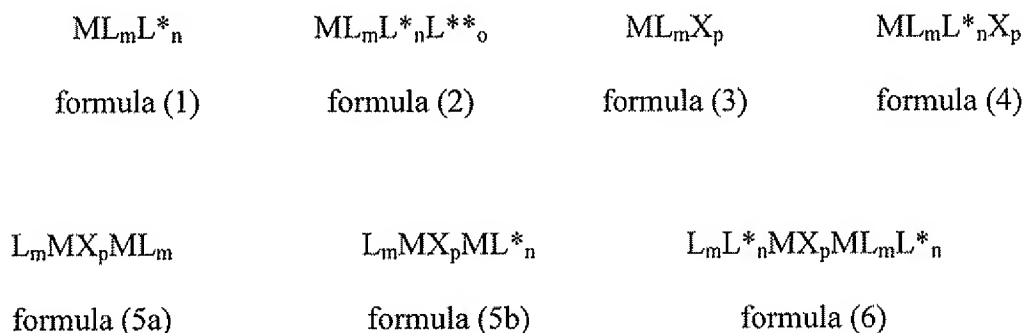


AMENDMENTS TO THE CLAIMS

1. (Cancelled)
2. (Cancelled)
3. (Currently Amended) A process for preparing compounds of the formula (1), (2), (3), (4), (5a), (5b) and (6) according to scheme 1

Scheme 1:



in which:

M is a ~~transition metal~~, rhodium, iridium, palladium, platinum or gold,

L, L*, L** are different ortho-metalated ligands,

X is the same or different at each instance and is an uncharged, anionic or cationic, monodentate or multidentate, bridging or chelating ligand,

m is 1, 2 or 3,

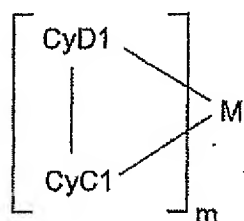
n is 0, 1 or 2,

o is 0 or 1, where $m + n + o = 2$ or 3 in each case,

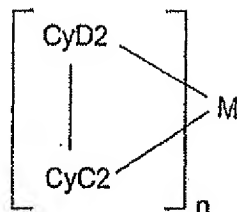
p is 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 or 12,

and where the partial structure ML_m is described by the formula (7), the partial structure ML_n^* by the formula (8) and the partial structure ML_o^{**} by the formula (9) according to scheme 2

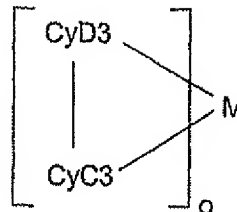
Scheme 2:



formula (7)



formula (8)



formula (9)

in which:

CyD1, CyD2, CyD3 are each **heteroaromatic** cyclic groups which may in turn bear one or more substituents R, containing, endocyclically or exocyclically, a donor atom D1, D2 and D3 via which the cyclic groups are bonded to the metal; the CyD1 and CyC1 groups, the CyD2 and CyC2 groups, and the CyD3 and CyC3 groups are joined together via one or more covalent bonds,

CyC1, CyC2, CyC3 are each cyclic groups which may in turn bear one or more substituents R and each include a carbon atom via which the cyclic groups are bonded to the metal,

R are the same or different at each instance and are F, Cl, Br, I, NO₂, CN, a straight-chain, branched or cyclic alkyl or alkoxy group having from 1 to 20 carbon atoms, in which one or more nonadjacent CH₂ groups may be replaced by -O-, -S-, -NR¹-, -CONR²-, -CO-O-, -C=O-, -CH=CH- or -C≡C-, and in which one or more hydrogen atoms may be replaced by F, or an aryl or heteroaryl group which has from 4 to 14 carbon atoms and may be substituted by one or more nonaromatic R radicals, and a plurality of substituents R, either on the same ring or on the two different rings, may together in turn form a mono- or polycyclic, aliphatic or aromatic ring system,

R¹ and R² are the same or different and are each H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 carbon atoms,

by reacting a metal compound M comp. with compounds of the formula (10a), (10b), (10c) according to scheme 3 in a melt, suspension, dispersion, solution or in a supercritical medium

Scheme 3:

CyD1.



CyC1 - H

formula (10a)

CyD2



CyC2 - H

formula (10b)

CyD3



CyC3 - H

formula (10c)

in which the CyD1, CyD2, CyD3, CyC1, CyC2 and CyC3 radicals are each as defined under formula (7) to (9), wherein the reaction mixture is heated at a temperature in the range from 100 to 210°C and microwave radiation of frequency from 300 to 300 000 MHz acts on the mixture comprising the metal compound M comp. and the compounds of the formula (10a), (10b), (10c)

and wherein the molar ratio of the metal compound to the compounds of the formula (10a), (10b), (10c) is from 1:1 to 1:20.

4. (Cancelled)

5. (Cancelled)

6. (Previously presented) The process as claimed in claim 3, wherein the metal compounds M comp. used are hydrated or anhydrous metal halides and/or halide-containing complexes and coordination compounds, or metal hydroxides, oxides or alkoxides, or metal β -ketoketonates and metal β -ketocarboxylates.

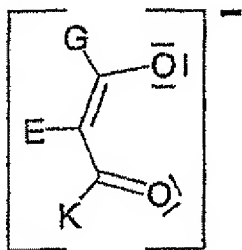
7. (Previously presented) The process as claimed in claim 3, characterized in that the donor atoms D1, D2 and D3 in the compounds of the formula (10a), (10b) and (10c) correspond to nitrogen, phosphorus, arsenic, antimony, bismuth, oxygen, sulfur, selenium or tellurium.

8. (Previously presented) The process as claimed in claim 3, characterized in that the ligands X are uncharged, anionic or cationic, monodentate ligands, multidentate bridging ligands or multidentate chelating ligands.

9. (Previously presented) The process as claimed in claim 8, characterized in that the

ligands X are acetylacetonates of the formula (11) according to scheme 5

Scheme 5



formula (11)

where:

K, G are the same or different at each instance and are a linear or branched alkyl group having 1-20 carbon atoms, in which one or more nonadjacent CH₂ groups may be replaced by -O-, -S-, -NR¹-, -CONR²-, -CO-O-, -CO-, -CH=CH- or -C≡C-, and in which one or more hydrogen atoms may be replaced by F or aromatic groups, or an aryl and/or heteroaryl group having 3-20 carbon atoms or an alkoxide OR¹,

E is the same or different at each instance and is a linear or branched alkyl group having 1-20 carbon atoms, in which one or more nonadjacent CH₂ groups may be replaced by -O-, -S-, -NR¹-, -CONR²-, -CO-O-, -CO-, -CH=CH- or -C≡C-, and in which one or more hydrogen atoms may be replaced by F or aromatic groups, or an aryl and/or heteroaryl group having 3-20 carbon atoms,

R¹ is H or an aliphatic or aromatic hydrocarbon radical having 1 to 20 carbon atoms.

10. (Previously presented) The process as claimed in claim 3, wherein the microwave radiation of frequency from 500 to 10 000 MHz is used.

11. (Previously presented) The process as claimed in claim 3, wherein the power used is from 1 watt per liter to 10 000 watts per liter.

12. (Previously presented) The process as claimed in claim 3, wherein the microwave radiation is of the monomodal type.
13. (Previously presented) The process as claimed in claim 3, wherein is carried out by a continuous process or in a batchwise process.
14. (Previously presented) The process as claimed in claim 3, wherein the C-H bond(s) is/are aryllic, vinylic and/or allylic C-H bond(s).
15. (Canceled)
16. (Currently Amended) The process as claimed in ~~claim 15, characterized in that~~ claim 3, wherein the molar ratio of the metal compound to the compounds of the formula (10a), (10b), (10c) is from 1:6 to 1:12.